What is claimed is

1. An array substrate comprising:

a first wire line arranged on a substrate;

a second wire line run as extended from the first line but not continuous with the first wire line, and being arranged in a wire pattern layer same with the first wire lines; and

a conductor connecting the first and second wire lines and being arranged to cover the first and second wire lines through an insulator film;

said insulator film having a first aperture exposing a portion of the first wire line and having a second aperture exposing a portion of the second wire line;

said conductor being connected with the first and second wire lines respectively through the first and second apertures; and

length of said connector wire being larger than length directly connecting the first and second apertures in a direction along the first and second wire lines, in a plan view.

2. An array substrate for a flat-panel display comprising:

a plurality of scanning lines;

a plurality of signal lines arranged substantially perpendicular to the scanning lines through a first insulator film therebetween;

switching elements respectively disposed in a vicinity of each intersection of the scanning and signal lines, and a terminal of the switching element being electrically connected with the signal line;

a second insulator film covering such multi layer wiring pattern;

pixel electrodes arranged in a matrix as to respectively correspond to said each intersection, on the second insulator film;

pixel-electrode contact holes perforating the second insulator film as to electrically connect another terminal of the switching element to the pixel electrode;

wire breakage occurred to the signal or scanning line;

a pair of contact holes perforating the second insulator film as to expose upper face of said signal or scanning line, at its wire portions interlaying the wire breakage;

a bypass wire extending from one to another of the pair of contact holes as to detour the wire breakage and to electrically connect said wire portions interlaying the wire breakage;

a pixel-electrode cutout being formed by removing the pixel electrode in an area ranging from vicinity of the wire breakage to a place receiving the bypass wire line.

3. An array substrate according to claim 2,

said bypass wire running along edge of the pixel-electrode cutout as to detour vicinity of the wire breakage; and

further comprising a light-insulator film arranged on an area surrounded by the wire breakage, the bypass wire and said wire portions interlaying the wire breakage.

4. An array substrate according to claim 2 or 3,

said bypass wire being spaced apart from the pixel electrode as to prevent electrical contact between them.

5. An array substrate according to claim 2, said bypass wire being a solid pattern as extended to vicinity of the wire breakage so as to cover substantially whole area within the pixel-electrode cutout.

6. An array substrate according to claim 2 or 5,

the second insulator film being a resin film having thickness equal to or more than 1μm or being a multi-layer film including such resin film;

the bypass wire being arranged in an area removed with the resin film and exposed with a non-resin insulator film.

7. A method for manufacturing an array substrate for a flat-panel display having a plurality of scanning lines; signal lines arranged substantially perpendicular to the scanning

lines; pixel electrodes being arranged in a matrix each to correspond with respective one of intersections of the scanning lines and the signal lines; and switching elements each being disposed in vicinity of respective one of said intersections as to input signal from the signal line to the pixel electrode; comprising:

a series of film formations and patterning for achieving the signal and scanning lines and the switching elements;

detecting a wire breakage on a wire within a pixel area and position of the wire breakage;

forming a cutout on one of the pixel electrodes by removing a conductive film consisting said one of the pixel electrodes at vicinity of the wire breakage, on one or both of areas demarcated by said wire having the wire breakage, by laser irradiation; and

forming a bypass wire detouring the wire breakage and electrically connecting two wire parts interlaying the wire breakage, by sequential or continuous depositing of a conductive layer at inside of said cutout using laser CVD technique.

8. A method for manufacturing an array substrate for a flat-panel display comprising:

a series of film formations and patterning for forming a plurality of scanning lines; signal lines arranged substantially perpendicular to the scanning lines with a first

insulator film therebetween; and switching elements each being disposed in vicinity of respective one of intersections of the scanning lines and the signal lines and having a terminal electrically connected with the signal line; and thereby forming a multi-layer wire pattern including the scanning and signal lines and the switching elements;

forming a second insulator film covering the multi-layer wire pattern;

forming pixel electrodes being arranged in a matrix each to correspond with respective one of said intersections, on the second insulator film;

forming pixel-electrode contact holes for perforating the second insulator film as to connect another terminal of the switching element to the pixel electrode; further comprising:

detecting a wire breakage on a wire within a pixel area and position of the wire breakage;

forming a cutout on one of the pixel electrodes by removing a conductive film consisting said one of the pixel electrodes at vicinity of the wire breakage, on one or both of areas demarcated by said wire having the wire breakage, by wire breakage; and

forming a bypass wire detouring the wire breakage and electrically connecting two wire parts interlaying the wire breakage, by sequential or continuous depositing of a conductive

layer at inside of said cutout using laser CVD technique.

9. A method for manufacturing an array substrate according to the claim 7 or 8,

the bypass being formed as running along edge of said cutout of the pixel electrode and as detouring vicinity of the wire breakage at said forming of the bypass; and further comprising:

depositing a conductive layer by laser CVD technique to an area surrounded by the bypass wire, the wire breakage and wire portions interlaying the wire breakage, as to form a pattern of a light insulator film covering said area, after the forming of the bypass wire.

10. A method for manufacturing an array substrate according to the claim 7 or 8, wherein

a resin film having a thickness equal to or more than 1μm or a multi-layer film including the resin film is formed as the second insulator film;

a laser irradiation is used for forming the cutout of the pixel electrode and for exposing the removing the resin film within a region inside of the cutout as to expose an insulator film thereunder.

11. A method for manufacturing an array substrate

according to the claim 7, 8 or 10, the bypass wire being formed as a solid pattern filling inside of said cutout.

12. A method for manufacturing an array substrate according to the claim 7, 8 or 10, a laser CVD technique being used to form the bypass wire and to form a metal light-insulator film covering an end face of the resin film.

13. A method for manufacturing an array substrate according to the claim 7 or 8, wherein when the wire breakage is determined to be due to interposing of a foreign matter, then said forming of the cutout and said forming of the bypass wire is made; and when the wire breakage is determined to be due to other cause, then a connecting wire extending along said wire is formed by CVD technique.

14. An array substrate for a flat-panel display comprising a plurality of scanning lines; signal lines arranged substantially perpendicular to the scanning lines with a first insulator film therebetween; switching elements each being disposed in vicinity of respective one of intersections of the scanning lines and the signal lines and having a terminal electrically connected with the signal line; a second insulator film covering a multi-layer wire pattern comprised of the signal and scanning lines and the switching elements; pixel electrodes

being arranged in a matrix each to correspond with respective one of said intersections; pixel-electrode contact holes for perforating the second insulator film as to connect another terminal of the switching element with the pixel electrode; and lead-out wires leading out from the scanning lines and the signal lines to peripheral part outside of a pixel area; further comprising:

a wire breakage formed on the lead-out wire due to interposing of a foreign matter;

a pair of contact holes perforating the second insulator film as to expose upper surface of the lead-out wire at its portions interlaying the wire breakage; and

a bypass wire extending from one to other of the pair of contact holes and detouring the wire breakage, on the second insulator film, as to electrically connect two wire parts interlaying the wire breakage; and

said bypass wire having a width more than two times of that of the lead-out wire.

15. A method for manufacturing an array substrate for a flat-panel display comprising:

forming a plurality of wires on a substrate;

forming an insulator film coating the wires;

detecting a wire breakage among the plurality of wires;

partly removing the insulator films as to form apertures

on portions of the wire interlaying the wire breakage; and

forming a bypass wire electrically connecting said apertures along a path not overlapping the wire breakage in a plan view.

16. A method for manufacturing an array substrate according to claim 15, further comprising: removing the insulator film on the wire breakage.

17. A method for manufacturing an array substrate according to claim 15, further comprising: forming an organic resin film on said insulator film; and removing the organic resin film at a portion for forming the bypass wire.